

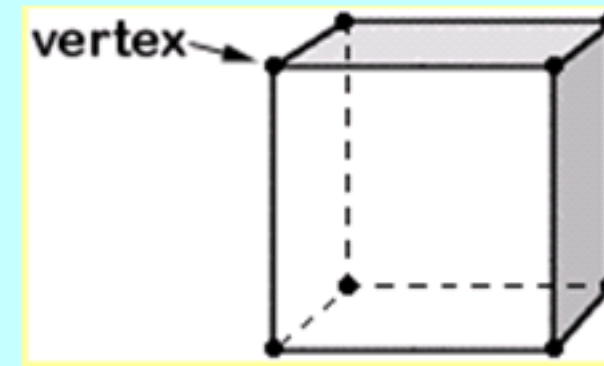
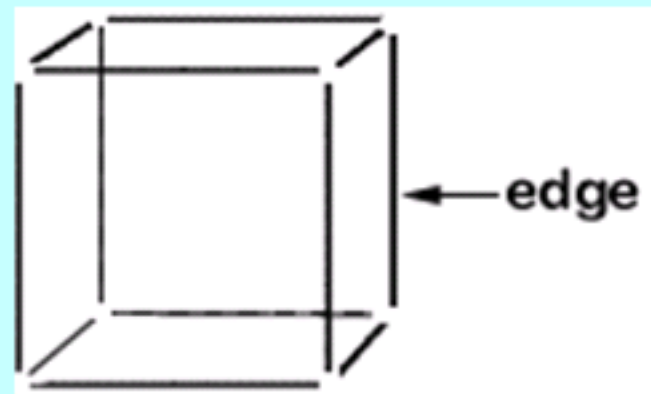
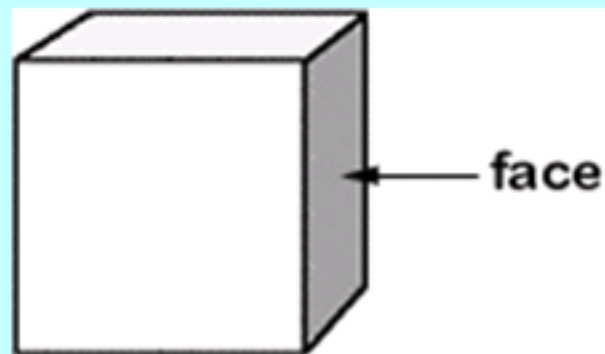
Exploring Solids

Polyhedron - a solid that is bounded by polygons

face(s) - the polygons that bound a polyhedron

edge - line segment formed by the intersection of two faces

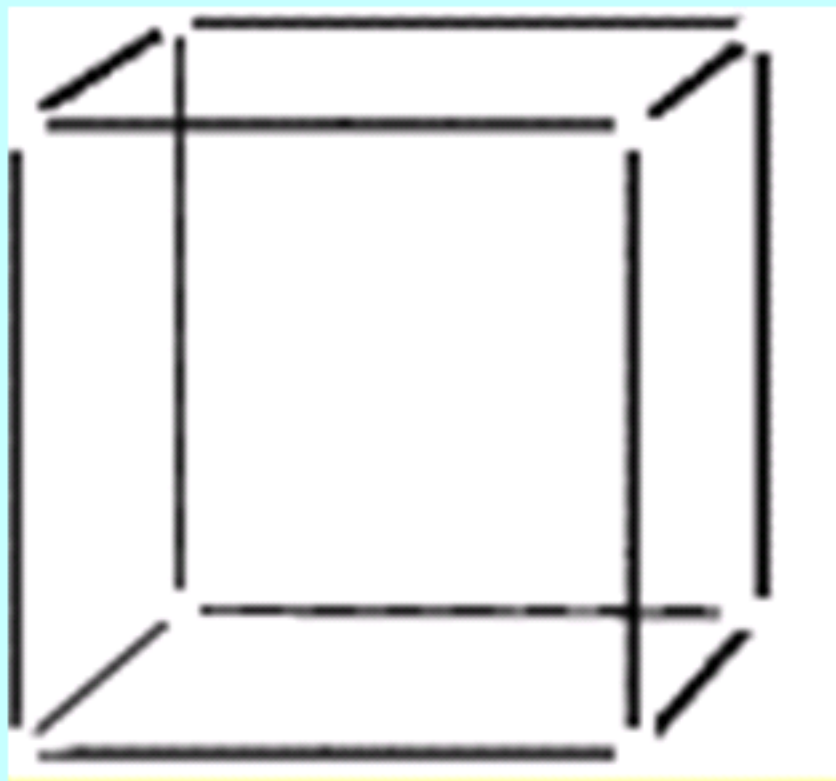
vertex - point where three or more edges meet



Theorem 12.1 - Euler's Theorem --

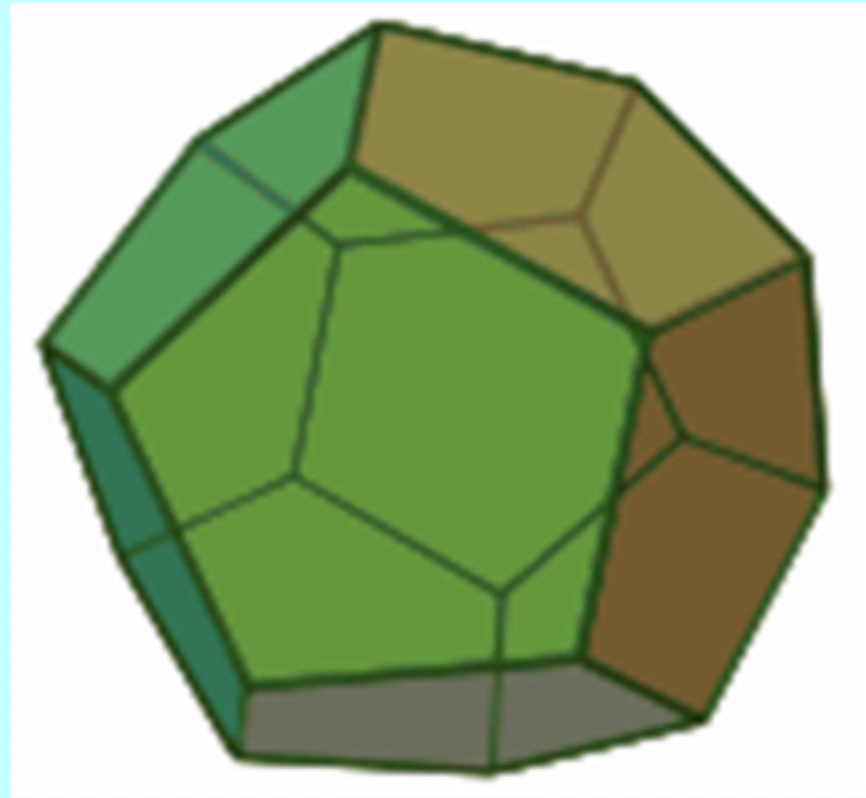
The number of faces (F), vertices (V), and edges (E) of a polyhedron is related by $F + V = E + 2$.

Check it with this cube.



Surface - the surface of a polyhedron consists of all points on its faces

Convex - a polyhedron is convex if any two points on its surface can be connected by a line segment that lies entirely inside or on the polyhedron.



Regular - a polyhedron is regular if all of its faces are congruent regular polygons, and the number of faces meet at each vertex in exactly the same way (same number of faces meet at each vertex)

FIVE types of regular polyhedrons -

regular tetrahedron - 4 faces

cube - 6 faces

regular octahedron - 8 faces

dodecahedron - 12 faces

icosahedron - 20 faces

Practice - p. 590 1 - 4
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Homework - Extra Practice 12.1

